California Regional Water Quality Control Board
Santa Ana Region

March 4, 2005

ITEM: 20

SUBJECT: Rubidoux Community Services District Sewage Spill

DISCUSSION:

On January 9, 2005, after significant rain events, the Santa Ana River changed course in the Rubidoux area and the very high flows in the River washed out two sewer lines owned by the Rubidoux Community Services District (RCSD). As a result, approximately 4.2 million gallons of raw sewage was released to the river over the next two days.

The community of Rubidoux is located between Highway 60 and the Santa Ana River, north and west of the City of Riverside. Approximately 2 million gallons per day of sewage from the community is discharged into a collection system operated by RCSD. The sewage is transported through a gravity system to a pump station along the Santa Ana River. At that point the wastewater is pumped through lines under the River and then into the City of Riverside's wastewater treatment plant.

Portions of the sewer lines leading to the pump station, and the pump station itself, were constructed within the floodplain of the Santa Ana River. However, these structures were located several hundred feet away from the normal flow path of the River. The River flow had not encroached into this area for decades.

In October 2004, RCSD personnel noticed that the Santa Ana River had changed from its historic course as a result of the recent heavy storms and began eroding the River bank and heading toward RCSD's facilities, as well as the Riverside County Parks Department maintenance yard and private homes. Although the Riverside County Flood Control and Water Conservation District was contacted, due to budget constraints and since there appeared to be no imminent danger to properties, no action was taken by the Flood Control District.

In late December, after further riverbank erosion, RCSD obtained an emergency permit from the Corps of Engineers to construct a groin within the River to protect its facilities. By January 4, 2005, approximately 1,100 tons of riprap had been placed in the River, and it appeared that the rock had deterred further erosion.

As a result of heavy rainfall that occurred over the preceding two days, on January 9, 2005, the River was rising and the velocity was increasing. By 9:00 a.m. that morning, the River level was cascading over the groin. By early that afternoon the increased River current had overwhelmed the District's earlier soil erosion control efforts. Additional manpower, equipment and rock were immediately called to the site; however, more riverbank continued to be lost to the floodwaters. Unfortunately, their efforts were useless against the raging River, and by that evening, RCSD

had lost approximately 1,400 feet of their 24" and 18" lines leading to their pump station and raw sewage began flowing directly into the River.

Once RCSD personnel realized that the loss of their lines was imminent, approximately 4,000 feet of diversion pipe and pumps were ordered to build a bypass line. Construction of the bypass line began later that evening. Construction of the bypass line continued the following day, Monday, January 10, and by early that evening RCSD was in a position to start pumping sewage through that line. However, the movement of heavy equipment in the area to save RCSD's lift station and a private residence prevented completion of certain sections of the line.

By the following morning, the residence was lost, and the River was only 50 feet away from RCSD's lift station. Throughout the day, contractors continued efforts to protect the lift station. Fortunately, the River had changed course again and began flowing away from the area. Later that afternoon, the contractors concluded their work, and RCSD was able to begin discharging the sewage through the bypass line by 6:00 p.m. that evening. An estimated 4.2 million gallons of raw sewage flowed into the River before the bypass could be achieved.

RCSD is continuing to use the temporary bypass line until a more permanent solution is constructed. Current plans for the permanent solution include relocating the lift station out of the floodplain and installing a force main along Riverview Drive (provided the County will protect Riverview Drive from flooding) to a location near the old lift station where the new line will tie into the line running under the River.

RECOMMENDATION:

Staff believes that the relatively sudden change in the River's course was an unforeseen circumstance. Once the RCSD realized that its facilities were in danger, they did everything reasonable to protect them. However, those efforts were overwhelmed. Therefore, staff recommends that no further action be taken with regard to this sewage spill, other than to monitor the RCSD's progress toward the construction of a permanent solution.